

Customer No. 24498
Attorney Docket No. PU020105
Advisory Action Date: 12/15/2009
Final Office Action Date: 09/04/2009

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Remarks/Arguments

Claims 1-24 are pending in this application, and are rejected in the final Office Action of September 4, 2009.

Applicants maintain that the previous claims are patentably distinguishable over the cited references for at least the arguments presented in the response filed on November 10, 2009. However, to move the prosecution of this case forward, the claims have been amended to more clearly and distinctly recite the subject matter that applicants regard as their invention. Support for the amendments is provided, for example on page 6, line 10 – page 7, line 4. No new matter is believed to be added by the present amendment.

Re: Claims 1-12, 14-19, 21 and 23

Claims 1-12, 14-19, 21 and 23 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,959,659 issued to Dokic (hereinafter, "Dokic"). Applicants respectfully traverse this rejection for at least the following reasons.

Applicants submit that the present amended claims are patentably distinguishable over Dokic for at least the same reasons as those discussed in the response filed on November 10, 2009.

Additionally, in the Advisory Action dated December 15, 2009, the examiner states that Applicants' characterization of Dokic's teachings are taken out of context in that "the processing of the default program only occurs when there is an absence of a user selected program [Abstract & Col. 8 lines 55-60]. This feature is an alternative embodiment of Dokic which is used in the absence of a user selected program which occurs when the user turns on the television. For a channel change operation, when the user selects a program the host microprocessor starts decoding the relative transport packets to expedite the channel change [col. 5, lines 8-18]."

Applicants submit that the claimed invention is patentably distinguishable over any embodiment described by Dokic because the arrangement of Dokic fails to disclose or suggest notable aspects of the claimed invention.

In summary, the present invention addresses and solves the problem that in a digital television system, in order to perform a channel change, the receiver must first

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receive program specific information and decoder synchronization data before programming associated with a newly selected channel can be decoded and displayed. The program specific information must be extracted, and elements of the receiver must be configured based on this information in order to receive desired channel and begin decoding.

The present invention addresses and solves this problem by providing for immediately initiating a data caching in response to a channel change event. The caching operation enables incoming decoder synchronization data (e.g., sequence header data) to be cached so that synchronization data, including those that may occur before the program specific information, may be found quickly after the program association table data and program map table data is captured and processed (see page 6, lines 26-32 of Applicants' specification). That is, the decoder does not have to wait for the next instance of decoder synchronization data after acquiring the program specific information if decoder synchronization data is already captured in the cache operation.

In this regard, amended claim 1, for example, recites:

immediately initiating caching of an incoming data stream associated with a newly selected channel in response to the channel change command, the cached data stream including decoder synchronization data;
finding program specific information included within the incoming data stream;
finding a first instance of decoder synchronization data within the cached data stream including decoder synchronization data received before the program specific information found in the incoming data stream; and
decoding the incoming data stream associated with the newly selected channel in response to the first instance of decoder synchronization data. (emphasis added)

Independent claims 7, 14, 21 and 23 recite features similar to claim 1 above. Applicants submit that Dokic fails to disclose or suggest each and every limitation of the amended claims.

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By contrast, Dokic addresses the problem of channel change delays caused when a received bitstream includes a back to back instance of a Program Association Table (PAT) and Program Map Table (PMT) (see fig. 2, elements 46 and 48, Abstract, col. 3, lines 17-20 and lines 35-39). The delay may be caused because the decoder is unable to process the back to back instance of the PAT and PMT quickly enough. To address the problem, Dokic provides a system that uses a de-coupled processor architecture to quickly process the PAT and PMT, even if they are sent in a back to back configuration (col. 4, lines 13-36).

However, nowhere does Dokic disclose or suggest a system that allows for quick channel changes by immediately caching an incoming data stream in response to a channel change command, to thereby enable finding of a first instance of decoder synchronization data including synchronization data received before the program specific information, i.e., PAT and PMT, in the data stream. Dokic does not address, and the disclosed arrangement does not provide for, this feature.

As to the additional portion of Dokic cited by the examiner in the advisory action, col. 5, lines 8-18 states:

In accordance with still another aspect of the invention, a software routine is disclosed for governing the operation of the digital signal processor. The software routine directs the demultiplexing and limited interpretation of the MPEG-2 transport packets, selecting a default program for initial decoding and display to a viewer. The software routine also handles communication with the host microprocessor, in order to provide the host microprocessor with PSI and private data, as well as to receive instructions from the host microprocessor concerning which transport packets to decode once a user selects a program. (emphasis added)

The cited portion indicates that the software routine provides information to the host microprocessor to enable the microprocessor to select the relevant transport packets for decoding once the user selects a program. The cited portion does not disclose or suggest in any way that the incoming data stream is cached immediately in response to a channel change command to enable finding of a first instance of decoder synchronization data including synchronization data received **before** the program specific information.

A stated advantage of the arrangement of Dokic is that since the analysis of the PAT and PMT occur quickly, the system is able to begin acquisition of the transport

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packet immediately following the PMT (see col. 4, lines 54-60). However, Dokic does not address at all how the system is able to find synchronization data that occurs before the PMT.

In view of the above, applicants submit that Dokic fails to disclose or suggest each and every limitation of amended claim 1 and the claims that depend therefrom, and thus, these claims are patentably distinguishable over the teachings of Dokic. The remaining independent claims have been amended to recite features similar to those of claim 1, and thus, these claims, and the claims that depend therefrom, are believed to be patentably distinguishable over Dokic for at least the same reasons as those discussed above with respect to claim 1.

Re: Claims 13, 20, 22 and 24

Claims 13, 20, 22 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Dokic in view of U.S. Patent Publication No. 2002/0196939 by Unger et al. (hereinafter, "Unger"). Applicants respectfully traverse this rejection for at least the same reasons pointed out above in connection with independent claims 7, 14, 21 and 23 (from which claims 13, 20, 22 and 24 respectively depend) since Unger is unable to remedy the deficiencies of Dokic. Accordingly, Applicants submit that claims 13, 20, 22 and 24 are patentable over the proposed combination of Dokic and Unger, and withdrawal of the rejection is respectfully requested.

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Conclusion

In view of the foregoing remarks/arguments, the Applicants believe this application stands in condition for allowance. Accordingly, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the Applicants' attorney at (609) 734-6815, so that a mutually convenient date and time for a telephonic interview may be scheduled. No fee is believed due from this response. However, if a fee is due, please charge the fee to Deposit Account 07-0832.

Respectfully submitted,


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